

Accelerating studies on the ontogeny and morphological diversity in immature mites

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Over 58,000 species of mites have been described (Zhang 2011; Liu *et al.* 2013)¹. Most species of mites are known only as adults, although immature instars also present a diversity of characters and other information potentially useful for understanding mite taxonomy, phylogeny and biology. A recent overview of juvenile instars of oribatid mites (excluding Astigmata) shows that only about 8% of the known oribatid mites have one or more juvenile instars described (Norton & Ermilov 2014). A survey of papers published during the last three years (2015–2017) in five main acarological journals (*Acarina*, *Acarologia*, *International Journal of Acarology*, *Persian Journal of Acarology*, *Systematic and Applied Acarology*) and two other main zoological journals (*Zootaxa* and *ZooKeys*) with mite papers showed only 3% to 19% of these with descriptions of immatures, but among the 151 species included in these papers as many as 61% have full data on the ontogeny (Liu & Zhang 2018).

This series of special volumes on the ontogeny and morphological diversity in immature mites in *Zootaxa* aims to encourage and promote studies in this subject, and to facilitate the publication of papers. We welcome papers reporting comparative morphology of all life stages. We understand that such papers can be longer than papers reporting adults only and we are flexible about the sizes of papers. We appreciate detailed descriptions and illustrations of all life stages following standards of F. Grandjean and others.

It is my great pleasure to present this first special issue on the ontogeny and morphological diversity in immature mites. This special issue on mite ontogeny collects ten papers on a variety of taxa and topics: two papers on Mesostigmata (Gerdeman *et al.* 2018; Ma *et al.* 2018); three papers on Oribatida (Bayartogtokh & Ermilov 2018; A. Seniczak & S. Seniczak 2018; S. Seniczak & A. Seniczak 2018); four on Trombidiformes (Yi *et al.* 2018; Li *et al.* 2018; Xu *et al.* 2018; Castro *et al.* 2018); one general survey of papers during the last three years (Li & Zhang 2018).

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1. Zhang (2011) estimated over 54,600 described species of Acari. Liu *et al.* (2013) estimated an average of about 600 new species of mites per year, which translates to about 4200 new species during 2012 to 2018. Thus, it is reasonable to estimate that over 58,000 species of mites have been described.

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